Amendments to the Claims.

This listing of claims replaces all prior version and listings of claims in this application:

1-39/ (Cancelled).

40. (Currently amended) A method of preparing a bioceramic composition, comprising:

mixing powders of a calcium phosphate and a promoter;

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pressing said ~~the~~ powders to form a compressed object of a predetermined shape; and

hydrating said ~~the~~ compressed object to form a reaction product, said ~~the~~ reaction product comprising a poorly crystalline apatitic calcium phosphate.

42. (Currently amended) A composite material, comprising:

a strongly bioresorbable, poorly crystalline apatitic calcium phosphate in contact with a biocompatible supplemental material,

C2

wherein said supplemental material is present in an amount effective to impart a ~~selected~~ characteristic selected from the group consisting of strength, resorption time, adherence, frictional characteristics, release kinetics, tensile strength, hardness, fracture toughness, elasticity, and imaging capability to said ~~the~~ composite.

43. (Currently amended) A bioceramic composition comprising:

a compressed powder object of a predetermined shape,

said compressed powder object comprising powders of a calcium phosphate and a promoter,

wherein said promoter is selected to promote conversion of said ~~the~~ calcium phosphate into a strongly bioresorbable, poorly crystalline apatitic calcium phosphate.

103. (Currently amended) A method for treating a bone defect comprising:

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identifying a bone site for receiving an implant;

introducing a compressed powder object at the bone site, said compressed powder object comprising a calcium phosphate and a promoter and having approximately the shape required for repair of the bone defect,

whereby said ~~the~~ compressed powder object is converted *in vivo* into a strongly bioresorbable poorly crystalline apatitic calcium phosphate.

111. (Currently amended) The method of claim 40, wherein said hydrating is characterized by an endothermic reaction.

112. (Currently amended) The method of claim 40, wherein said hydrating further comprises incubating the compressed object at about 37 °C.

113. (Currently amended) The method of claim 40, wherein said hydrating is carried out *in vivo*.

114. (Currently amended) The method of claim 40, wherein said hydrating comprises using a hydration medium to hydrate said ~~the~~ compressed object,

wherein said hydration medium is selected from the group consisting of physiological fluids, serum culture medium, and tissue culture medium.

115. (Currently amended) The method of claim 40, further comprising lyophilizing said ~~the~~ reaction product.

116. (Currently amended) The method of claim 40, further comprising contacting said ~~the~~ powders with a biologically active agent.

117. (Currently amended) The method of claim 116, wherein said ~~the~~ biologically active agent is selected from the group consisting of antibiotics, bone morphogenic protein, bone regenerative proteins, and vaccines.

118. (Currently amended) The method of claim 40, wherein said ~~the~~ promoter is selected from the group consisting of calcium metaphosphate, dicalcium phosphate dihydrate, heptacalcium decaphosphate, tricalcium phosphates, calcium pyrophosphate dihydrate, crystalline

hydroxyapatite, PCA calcium phosphate, calcium pyrophosphate, monetite, octacalcium phosphate, CaO, $CaC0_3$, calcium acetate, and H_2PO_4, and amorphous calcium phosphate.

119. (Currently amended) The method of claim 40, wherein said ~~the~~ promoter comprises dicalcium phosphate dihydrate (DCPD).

120. (Currently amended) The method of claim 40, further comprising the step of mixing a supplemental material with said ~~the~~ powders.

121. (Currently amended) The method of claim 120, wherein said ~~the~~ supplemental material is demineralized bone.

123. (Currently amended) The method of claim 40, wherein said poorly crystalline apatitic (PCA) calcium phosphate is further characterized in that when at least one gram of said poorly crystalline apatitic (PCA) calcium phosphate is implanted at a rat intramuscular site, at least 80% of said poorly crystalline apatitic (PCA) calcium phosphate is resorbed within one year.

124. (Currently amended) The method of claim 40, wherein said ~~the~~ calcium phosphate comprises amorphous calcium phosphate.

125. (Currently amended) The method of claim 43, wherein said poorly crystalline apatitic (PCA) calcium phosphate is further characterized in that when at least one gram of said strongly bioresorbable, poorly crystalline apatitic (PCA) calcium phosphate is implanted at a rat intramuscular site, at least 90% of said strongly bioresorbable, poorly crystalline apatitic (PCA) calcium phosphate is resorbed within one year.

126. (Currently amended) The composition of claim 43, wherein said ~~the~~ calcium phosphate comprises amorphous calcium phosphate.

127. (Currently amended) The composition of claim 43, wherein said ~~the~~ object further comprises a hydration medium to hydrate the object.

128. (Currently amended) The composition of claim 127, wherein said ~~the~~ hydration medium is selected from the group consisting of physiological fluids, serum culture medium, and tissue culture medium.

129. (Currently amended) The composition of claim 127, wherein said conversion is characterized by an endothermic reaction.

130. (Currently amended) The composition of claim 43, further comprising a biologically active agent.

131. (Currently amended) The composition of claim 130, wherein said ~~the~~ biologically active agent is selected from the group consisting of antibiotics, bone morphogenic protein, bone regenerative proteins, and vaccines.

132. (Currently amended) The composition of claim 43, wherein said ~~the~~ promoter comprises dicalcium phosphate dihydrate (DCPD).

133. (Currently amended) The composition of claim 43, wherein said ~~the~~ promoter is selected from the group consisting of calcium metaphosphate, dicalcium phosphate dihydrate, heptacalcium decaphosphate, tricalcium phosphates, calcium pyrophosphate dihydrate, crystalline hydroxyapatite, PCA calcium phosphate, calcium pyrophosphate, monetite, octacalcium phosphate, CaO, $CaC0_3$, calcium acetate, and H_3PO_4, and amorphous calcium phosphate.

134. (Currently amended) The composition of claim 43, further comprising a supplemental material.

135. (Currently amended) The composition of claim 134, wherein said ~~the~~ supplemental material is demineralized bone.

136. (Currently amended) The composition of claim 127, wherein said poorly crystalline apatitic calcium phosphate has an x-ray diffraction pattern comprising broad peaks at 2θ values of 26°, 28.5°, 32° and 33°.

137. (Currently amended) The composition of claim 127, wherein said poorly crystalline apatitic calcium phosphate is further characterized in that when at least one gram of said strongly bioresorbable, poorly crystalline apatitic (PCA) calcium phosphate is implanted at a rat intramuscular site, at least 90% of said strongly bioresorbable, poorly crystalline apatitic (PCA) calcium phosphate is resorbed within one year.

138. (Currently amended) The method of preparing a bioceramic composition, comprising:

mixing powders of a calcium phosphate and a promoter in a hydrating medium to form a paste, said promoter selected to convert the mixed powders into a poorly crystalline apatitic calcium phosphate;

introducing said ~~the~~ paste into a mold of a predetermined shape; and

allowing said ~~the~~ paste to harden to thereby obtain a poorly crystalline apatitic calcium phosphate article of a predetermined shape.

139. (Currently amended) The method of claim 138, further comprising incubating said ~~the~~ paste at about 37 °C.

140. (Currently amended) The method of claim 138, wherein said ~~the~~ hydrating medium is selected from the group consisting of water, physiologically acceptable pH-buffered solutions, saline solution, serum culture medium, and tissue culture medium.

141. (Currently amended) The method of claim 138, further comprising lyophilizing said ~~the~~ article.

142. (Currently amended) The method of claim 138, further comprising contacting said ~~the~~ powders with a biologically active agent.

143. (Currently amended) The method of claim 142, wherein said ~~the~~ biologically active agent is selected from the group consisting of antibiotics, bone morphogenic protein, bone regenerative proteins, and vaccines.

144. (Currently amended) The method of claim 138, wherein said ~~the~~ promoter is selected from the group consisting of calcium metaphosphate, dicalcium phosphate dihydrate, heptacalcium decaphosphate, tricalcium phosphates, calcium pyrophosphate dihydrate, crystalline hydroxyapatite, PCA calcium phosphate, calcium pyrophosphate, monetite, octacalcium phosphate, CaO, $CaC0_3$, calcium acetate, and H_2P0_4, and amorphous calcium phosphate.

145. (Currently amended) The method of claim 138, further comprising the step of adding a supplemental material to said mixed powders.

146. (Currently amended) The method of claim 145, wherein said ~~the~~ supplemental material is demineralized bone.

147. (Currently amended) The method of claim 138, wherein said poorly crystalline apatitic calcium phosphate (PCA) has an x-ray diffraction pattern comprising broad peaks at 2θ values of 26°, 28.5°, 32° and 33°.

148. (Currently amended) The method of claim 138, wherein said ~~the~~ calcium phosphate comprises amorphous calcium phosphate.

149. (Currently amended) The method of claim 40, wherein said ~~the~~ powders are compressed using a hydraulic press.

150. (Currently amended) The method of claim 40, wherein said ~~the~~ powders are compressed under a pressure in the range of about 500 psi to about 5000 psi.

151. (Currently amended) The composition of claim 43, wherein said ~~the~~ compressed powder object has a density ranging from about 1.2 g/cm^3 to about 2.0 g/ cm^3.